

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the Application.

Listing of Claims:

1. (Currently amended) In a data storage environment having a first volume of data denominated as the source being stored on a data storage system, and a second volume of data denominated as a clone and which has data content that is a copy of the data content of the source being stored on the data storage system or on another data storage system, a method, operable on a computer system, for managing data content during a restoration of the source, the method comprising the steps of:

restoring the source by copying data content from the clone to overwrite the data content of the source, allowing host reads and writes to the source during the restoration restore;

if preserving the data content of the clone is selected, then not allowing the data content of the clone to be overwritten by host writes during the restoring step; and

if preserving the data content is not selected, then overwriting the data contents of the clone during the restoring step ~~restoration~~ and determining extents of the source affected by any host write request; and

if any extents affected by the host write request are involved during the restoring step ~~in the restoration~~ and preserving is not selected, then setting an indicator to indicate that the extents need to be re-copied.

2. (Original) The method of claim 1, wherein the source and the clone are each represented by respective first and second logical units.

3. (Original) The method of claim 1, wherein a map denominated as a protected restore map is used to track extents of the source that are modified during the preserving step if selected.

4. (Previously amended) The method of claim 1, wherein a map denominated as a clone delta map is used to track extents of the clone that are different between the clone and the source.

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Currently amended) A system for managing data content during restoration of data from a second volume of data to a first volume of data, the system comprising:

a data storage system having a first volume of data denominated as the source being stored on a data storage system, and a second volume of data denominated as the clone and which has data content that is a copy of the data content of the source being stored on the data storage system or on another data storage system;

computer-executable program logic configured for causing the following computer-executed steps to occur:

restoring the source by copying data content from the clone to overwrite the data content of the source, allowing host reads and writes to the Source during the restoration restore;

if preserving the data content of the clone is selected, then not allowing the data content of the clone to be overwritten by host writes during the restoring step; and

if preserving the data content is not selected, then overwriting the data contents of the clone during the restoring step ~~restoration~~ and determining extents on the source affected by any host write request; and

if any extents affected by the host write request are involved during the restoring step ~~in the restoration~~ and preserving is not selected, then setting an indicator to indicate that the extents need to be re-copied.

9. (Currently amended) The ~~method~~ system of claim 8, wherein the source and the clone are each represented by respective first and second logical units.

10. (Currently amended) The ~~method~~ system of claim 8, wherein a map denominated as a protected restore map is used to track extents of the source that are modified during the preserving step if selected.

11. (Currently amended) The ~~method~~ system of claim 8, wherein a map denominated as a clone delta map is used to track extents of the clone that are different between the clone and the source.

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Currently amended) A program product for use in a data storage environment and being for managing data content during restoration of data from a second volume of data to a first volume of data, wherein the data storage environment includes:

a data storage system having a first volume of data denominated as the source being stored on a data storage system, and a second volume of data denominated as the clone and which has data content that is a copy of the data content of the source being stored on the data storage system or on another data storage system; and

the program product includes computer-executable logic contained on a computer-readable medium and which is configured for causing a computer to execute the steps of:

restoring the source by copying data content from the clone to overwrite the data content of the source, allowing host reads and writes to the Source during the restoration ~~restore~~;

if preserving the data content of the clone is selected, then not allowing the data content of the clone to be overwritten by host writes during the restoring step; and

if preserving the data content is not selected, then overwriting the data contents of the clone during the restoring step ~~restoration~~ and determining extents on the source affected by any host write request; and

if any extents affected by the host write request are involved during the restoring step ~~in the restoration~~ and preserving is not selected, then setting an indicator to indicate that the extents need to be re-copied.